Water statistics and accounts in the Republic of Moldova

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Introduction

The Moldovan **Framework of national policy for water resources** is aimed at preventing the degradation of water resources at all levels, taking into consideration social and economic changes, the implementation of national plans and current trends in regions and river basins. The main objectives of national water policies are to carry out sustainable management of water, looking at all dimensions of the natural resource, including accessibility and quality needed for a healthy life. The role of **water resources statistics** is obvious, as one of the main means of studying ecological problems linked to the state of natural water resources and assessing them for enabling definition of governmental policies as well as orientations for reform and development of government bodies responsible for environmental protection.

Water data and statistics

National water resource statistics are based on the current environmental monitoring system, statistical surveys, scientific observations, research, thematic studies and inventories. These include:

- Monitoring of surface water resources: Hydro-meteorological service;
- Monitoring and observation of groundwater reserves (quantity as well as qualitative aspects): State Geological Agency " MoldageoM";
- Specific inventories carried out by state bodies responsible for water protection, sometimes run in the context of projects of WB, UNDP, UNEP, GEF: State Ecological Inspectorate, State Geological Agency " MoldageoM";
- Monitoring of quality of the state surface and groundwater resources from which drinking water is abstracted: Local sanitary and epidemiological services of the Ministry of Health;
- Statistical survey on water consumption: State Water Agency "Apele Moldovei";
- Statistical surveys on "Water supply and sewerage": State Statistical Department;
- Statistical surveys on environmental expenditure, ecological taxes, fees and capital investments: State Statistical Department;
- Observations made by thematic projects and scientific research institutes in the field of geography, geodesy and hydrology; in particular the Academy of Science and the National Institute of Ecology.

Monitoring of surface water resources by the Hydro-Meteorological Service

Since October 1944, the Hydro meteorological Service of Moldova monitors hydrological and hydro chemical parameters of water resources. The data collection includes daily primary data on quantitative hydrologic aspects of surface water resources from 40 monitoring stations.

Since 1993, basic information on the overall balance of water (precipitation, efficient rain, and runoff of the rivers) is archived in electronic format. However, data on stocks of water, in particular groundwater, still need to be introduced from paper reports into electronic form. This includes information on infiltration, underground outflows, runoff and percolation.

Daily data on water quality in the main rivers is monitored by 39 stations and has been archived in electronic support since 1993. The Hydro-Meteorological Service monitors around 70 parameters monthly; for example, the concentration of a pollutant at a locality in a river basin as mg/l or recurrence of pollutant in water corresponding to the Standard Concentration Limits.

Observation and monitoring of groundwater resources by the State Geological Agency"AgeoM"

The State Geological Agency"AgeoM" has been responsible for monitoring state use and protection of the groundwater resources since 1958. There are about 7000 wells in the territory of the Republic of Moldova, abstracting water from underground aquifers for water-supply purposes. Approximately one third of the wells are considered operational, being periodically used for water abstraction.

All information about the quantity and quality of groundwater available from a draw well is presented in the well's passport (certificate). These well passports are compiled into periodic well inventory reports that cover the majority of groundwater reserves under operation. They present detailed information about groundwater resources: location, ecological characteristics of water-bearing geological strata, well construction, aquifers, development works, measurements of hydrological parameters such as dependence of flow rate, water quality (composition of basic chemical components) as well as measures against pollution, etc.

In 2004, the creation of a database on groundwater resources began as part of the Water Data Centre, starting with the introduction of data on 1.6 thousand wells.

Data on water use and sewerage

The survey on "Water use" is an annual postal report from economic agents. It is mandatory, and has been conducted since 1983 for all water suppliers and users by the State Water Agency: "Apele Moldovei".

This survey gives data in m3 on withdrawals, supply, consumption, losses during use and supply, sewage, as well as the volume of discharge of 56 polluting substances in tons. Reported data are based on measures by water meters or by estimates on the

basis of volume of production, electricity consumption or the capacity of equipment being used by water consumers. The collected data allows the analysis of issues and problems related to water consumption at the regional level according to the type of economic unit and sector, and by catchments and connections to rivers.

The Department of Statistics runs a parallel survey to water companies on water supply and sewerage. The statistical survey "Activities on water supply and sewerage" captures data concerning the volume and cost of water supplied to consumers and wastewater subsequently collected in sewerage systems for treatment by either municipal services or enterprises. The data are measured by companies directly from water-gauge instruments, water counters or calculated using indirect correlations to technical capacities of water pumps and wastewater treatment plants. As well, financial reports on production and economic activities are compiled from bills and contracts for all categories of users, including population.

Water quality monitoring

The assessment of the state of water for the purposes of compliance with health standards is made by the sanitary and epidemiological services of the Ministry of Health based on the reported data of local laboratories.

The National Centre for Science and Preventive Medicine (NCSPM) and the territorial Centres of Preventive Medicine (CPM) assure water quality, including drinking water, surface and recreation waters, according to the Law of the Republic of Moldova "On sanitary-epidemiologic security of the population" nr. 1513-XII of June 16, 1993. Water resources, water pipes systems, wells and spring water are investigated according to the type and source of used water. The monitoring of water quality is conducted at 8 fixed control points on River Prut and Danube and at 6 points on River Nistru, which serve as sources of drinking water for the majority of population. Periodicity is quarterly for sampling points and monthly at water distribution points. Water reservoirs used for recreation are investigated twice prior to the bathing season and monthly during the season. Laboratory investigations cover 42 sanitary-chemical parameters, including pesticides, pathogenic flora, virology, microbiological and parasitological, etc. In the Water Data Centre, the last ten years of records of laboratories' results are being put into an electronic format, starting with the River Prut.

Monetary data

The annual financial statistical survey regarding the cost of water supply and distribution to different users (enterprises, population and others), the operation of sewerage systems and waste water treatments plants, is conducted by the Department of Statistics. The questionnaire contains data on income generated from water supply and wastewater treatment, with breakdowns by sectors, on expenditures for activities of enterprises, including investments in the reconstruction of water supply and sewerage systems.

Statistical surveys on expenditure for the protection of water resources, including ecological taxes and ecological fees, are based on annual questionnaires to economic agents. The questionnaires collect data on current expenditures for water protection

and the prevention of water resource pollution, water supply and waste-water cleaning, capital reparation of waste-water cleaning facilities and water reservoirs, payment of environmental taxes or fees for water resources pollution.

The main source of information regarding the allocation and use of capital expenditure for water resources protection is the statistical report "Use of Environmental Protection Investments". These data are provided on a compulsory basis by all enterprises and organizations investing in water protection facilities during the year.

The Water Accounts

On July 1998 a pilot study on water resources accounts started within the TACIS environment statistics project, steered by Eurostat, Ifen, (the French Environment Institute) being the principal operator. During this study period was organized data collection and compilation of the first experimental tables. This activity was carried out in connection to the drafting of the new SEEA2003. The original tables were subsequently adapted to match SEEA's methodology, ref. Chapter 8 and tables' codification: 8.3/ 8.5 Water Supply & Use, 8.4 Matrix of flows within the economy, 8.7 Asset water account (Overall water balance). Resource accounts in physical units have been established for 1994, 1998 and 2002 (Water Supply & Use tables only).

Annex 1: Water Accounts of Moldova: Tables 1994, 1998, 2002

The study demonstrated the existence of an important volume of statistics collected regularly by the Statistical office, Hydro-meteorological service and Water Agency, and the possibility to use them to assess the availability and use of water resources. As well, it highlighted the weak areas of water resources statistics.

The pilot study report with supply and use accounts based on current water data and statistics, as well as with the first water assets accounts were presented in the Inter-institutional workshop convened by Statistical office in Chisinau, January 2001. Participants were the Ministry of Ecology (Division of Environmental Policy and Service of Hydro-Meteorology), the Ministry of Economy, Apele Moldovei (the National Water Agency), the Institutes of Geology and of Geography and the Ministry of Health.
Two main conclusions acknowledged the interest of water accounts, because of their analytical potential to provide an information system which facilitates the formulation and evaluation of policies and strategies of sustainable development, especially in water and sanitation issue, as well as the usefulness of the accounting framework to overcome some gaps in the statistical system during the transition period (and beyond). At later meetings with executives of the Service of Hydro-meteorology, on the one hand and of Apele Moldovei, on the other hand, it was made clear that one of the limiting factors to the development of statistics and physical accounts of water was the **absence of an informatics database on water in Moldova.**

The technical solution chosen for the database consists in using the "Nopolu River Basin Management" software tool developed by the Beture-Cerec consulting company. The software integrates various alphanumeric and geographical datasets. Nopolu system is an open software platform and contains a range of functions such as:

- processing of conventional hydrological data and indicators,
- management of monitoring networks including sampling procedures that conform to the EEA/Eurowaternet standards,
- modelling of agricultural and urban flows of polluting substances to water,
- calculation of mass loading into rivers (river fluxes),
- production of water quantities accounts (supply & use, assets),
- water quality of rivers.

The project has focused on the centralisation of data, the creation of a national database on water, the installation of the NOPOLU System2 software, the training of Moldavian civil servants, and the continuation of water accounts development. During the project existing water data has been gathered on: hydrology, hydrogeology, hydrochemistry, economic sectors and household supply-use. Inventories have been made of lakes, dams, wastewater treatment plants, etc.

Difficulties and gaps in data and statistics collection

Modeling and water accounts approaches in assessing water resources have demonstrated weak aspects of statistics of water resources and water indicators, doubts regarding data reliability and accuracy resulting from contradictions and errors in similar data transcription between different sources.

The following problems with data were encountered during the compilation of the accounts:

- absence of data base on ground water resources, current information being based on an inventory which was carried out 20 years ago;
- need to improve the quality of monitoring data and statistics and to implement the methodological changes needed to better define these data, to improve data collection, processing and dissemination. Approach used is based on compulsory surveys and traditional indicators (even though they are very incomplete since the end of the Soviet system) instead of combining surveys, samplings, modelling and water accounts;
- there are a variety of methodological approaches to water data definitions, nomenclatures, codifications, and activities under the umbrella of WMO, WHO or FAO are not coordinated with environmental policy needs, especially at national and local levels. Compiling water accounts and comparing national definitions to international water data (UNSD, UN/ECE, Eurostat, EEA, OECD, World Bank and IFEN) have evidenced:
    - gaps in definition terms and methodologies, for example, water volumes consumed for agriculture including water used in livestock & cattle breeding complexes and water consumed by rural population;
    - lack definitions and data: e.g. water data linked to self abstraction, consumption and discharge by households, water supply, water self supply, etc.

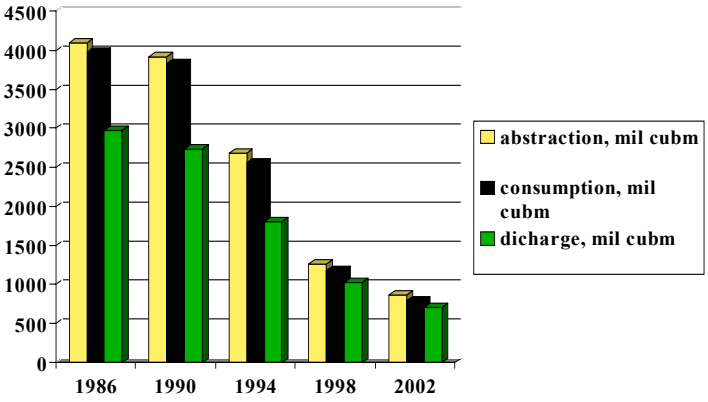
These peculiarities require revision of data surveys and monitoring, data collection processes and parallel changes to national methodologies to assess water indicators according to European standards.

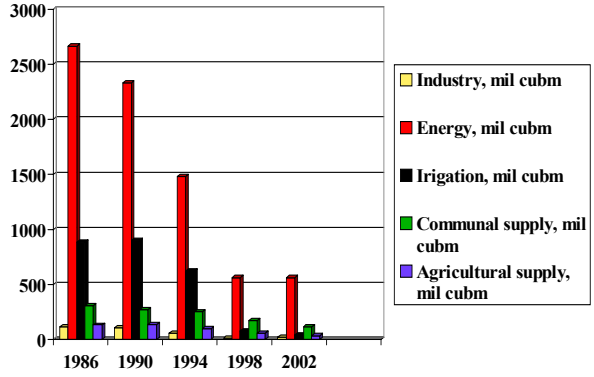
Problems identified and addressed

Statistical survey on water use

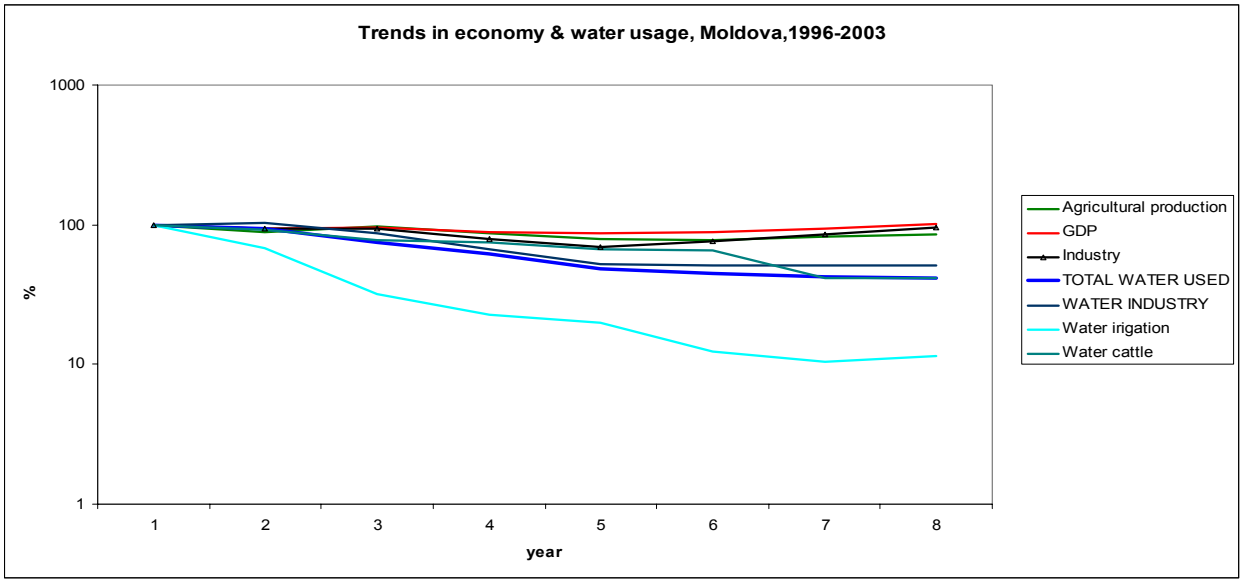
The National Water Agency has met difficulties in maintaining the traditional statistical survey related to water consumption based on compulsory water consumers reporting system.

In ten years, the number of economic agents increased from 5 000 to 116743 units (DSS, 2003). Collected data concerning water usage do not follow changes and trends in economic activities. Official statistics stated water used for irrigation per hectare has dropped by 90% in 2002 compared to 1995, when the irrigated surface dropped by 10% only.





The main conclusion from the study is that the survey does not cover water used in small business, especially in agrarian sectors, activities of rural households and urban households not connected to water supply systems and imperfectly covers the water supplied to users.

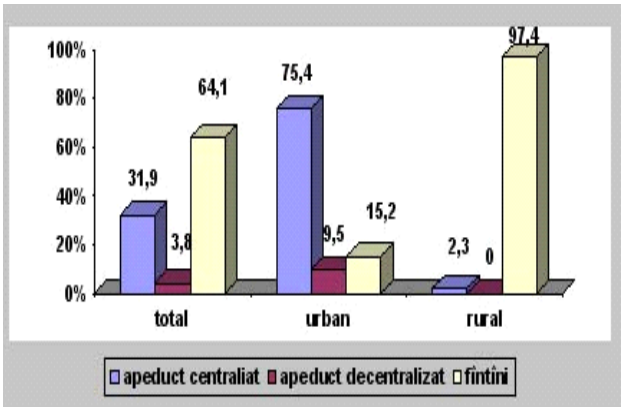


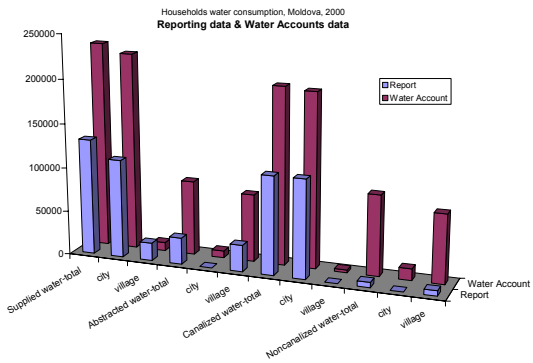
Actively involved in the WDC implementation, the Water Agency has recognized the existence of a problem concerning the quality of the survey on water consumption and has reviewed its general approach: shifting from exhaustive collection of data to selective methods of surveillance, use of more calculation methodologies as well as **water accounts**, which permit estimating water abstraction, supply and consumption in the different sectors of the national economy in a more realistic way.

Household water consumption – Household Budget Survey

In Moldova, the population is estimated at 4.3 million people, of whom 60% live in rural areas. A special Survey was introduced in 1999 and carried out within a sample frame of households (Household Budget Survey) to estimate water abstraction, consumption and pollution.

Only 36% of households are connected to water supply systems and 35% to sanitation, all others are drinking self-abstracted water from wells and springs. In villages, the water supply service is 3% and connection to sanitation is 2%. Households' volume of self-abstracted water is of 30 million m3 and wastewater self-discharged to the environment 26 million m3. In total they consume 162 million m3 of supplied or self pumped water, in urban and rural areas (2000 results).



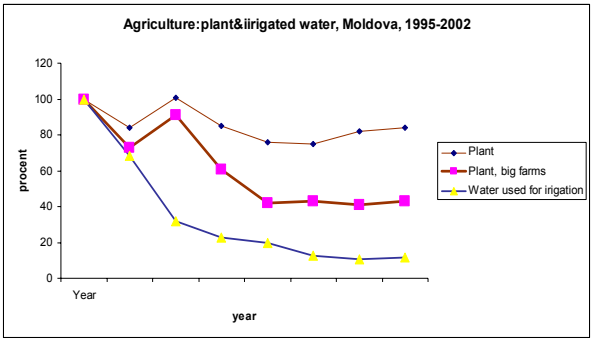


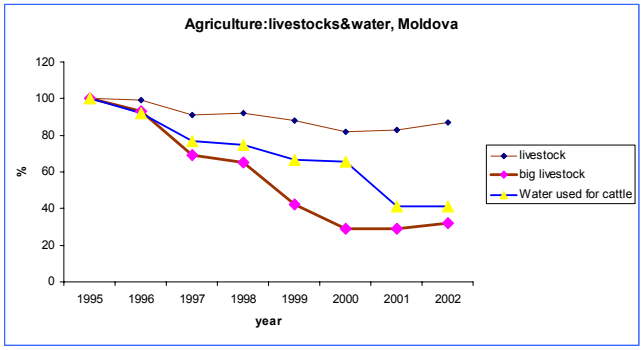
A quick example that it is important to produce and to publish reliable data for taking correct policy decision can be found from the website http://www.gapminder.org/: *"in Moldova 92% population have access to safe drink water"*.

This message gives a completely wrong picture about the situation in country regarding water supply and sanitation to the public, international institutions and donors, with the risk of compromising the implementation of urgent projects. According to the last statement of the Ministry of Health in Moldova, 44% of population or 1,8 million people have no access to safe drinking water (22 March 2005).

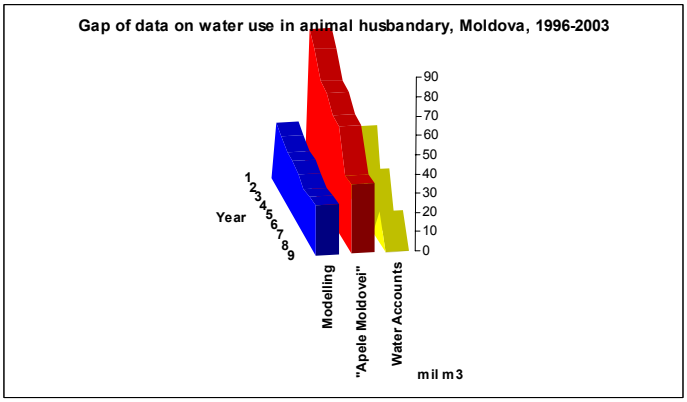
Agriculture and irrigation

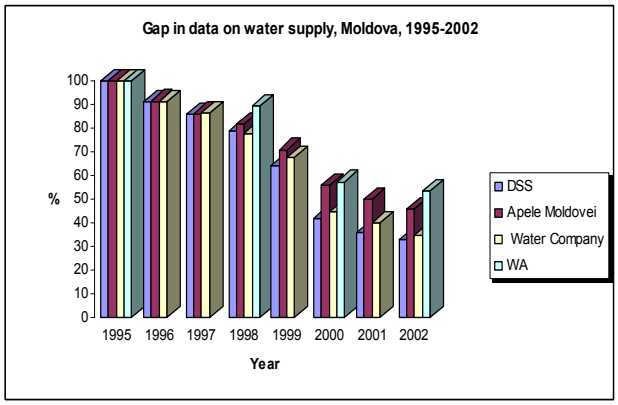
Agriculture is the single largest sector of Moldova's economy contributing approximately 33% to GDP and accounting for 65% of total country exports. In the structure of main agricultural activities, plant products make up more than 70%, among them cereals crops, grapes, vegetables. Agriculture is one of the main water users and polluters of surface and groundwater.





It is obvious that data on consumption by agriculture does not mirror and match the effective trends in animal husbandry and plant growing activities. The main reason for the unreliability is an absence of data on water usage by small producers, who produce more than 70% of the total agriculture production.





Conclusion

An important result of the water accounts project and the pilot study activities is the understanding of the users needs and of the ways and means to address them by developing the inter-institutional information network – the "Water Data Centre", that now acts under the authority of the Ministry of Ecology and Natural Resources.

Water accounting techniques are considered a good tool for identifying gaps and a good basis for deciding on rationale solutions to overcome them. These solutions may be the improvement of current surveys, the development of sampling surveys, the development of the monitoring networks and/or the use of hydrological models. In every case, it is based on a close inter-institutional co-operation, involving scientists and policy makers. On the other hand, discussions with water authorities lead to the conclusion that the changes in the Transition period may result in difficulties with the current surveys, due in particular to the very quick increase in statistical units.

References:

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Annex 1: Water Accounts of Moldova: Tables 1994, 1998, 2002

Table 8.3/8.5 Water Supply & Use Table, Moldova, 1994

Million cubic metres

		Agriculture	Fisheries	Energy	Mining	Manufacturing & Construction	Distribution/ irrigation water	Distribution/ municipal water	Sewerage	Government	Household	Rest of the World	Total
from the enironment	**U1 Total abstraction**	**147,1**	**46,0**	**1472,6**	**4,9**	**41,1**	**597,2**	**346,1**	**0,0**	**36,8**	**25,3**	**0,0**	**2717,1**
	from surface water	96,8	46,0	1470,5	0,0	20,1	597,1	222,0	0,0	0,0	0,0	0,0	2452,5
	of which reservoirs/dams			*1470,5*									*1470,5*
	of which lakes												*0,0*
	of which rivers												*0,0*
	of which springs												*0,0*
	from groundwater (wells, …)	50,3	0,0	2,1	4,9	21,0	0,1	124,1		36,8	25,3		264,6
	from other water (sea)												0,0
	for own use												
	for delivery												
within the economy	**U2 Total water received**	**532,1**	**0,9**	**9,8**	**0,0**	**18,4**	**0,0**	**4,7**	**240,3**	**10,4**	**215,0**	**0,0**	**1031,6**
	Water received by users	532,1	0,9	9,8	0,0	18,4	0,0	4,7		10,4	215,0	0,0	791,3
	of which recycled water				*0,0*	*5,3*							5,3
	Waste water for sewerage								240,3				240,3
Total use		***679,2***	***46,9***	***1482,4***	***4,9***	***59,5***	***597,2***	***350,8***	***240,3***	***47,2***	***240,3***	***0,0***	***3748,7***
within the economy	**S2 Total water supplied**	**3,0**	**0,0**	**0,0**	**0,0**	**38,3**	**530,0**	**253,0**	**0,0**	**35,3**	**172,0**	**0,0**	**1031,6**
	Water supplied to users	3,0	0,0	0,0	0,0	5,3	530,0	253,0	0,0	0,0	0,0	0,0	791,3
	of which recycled water			*0,0*		*5,3*							
	Waste water supplied to sewerage					33,0			0,0	35,3	172,0		240,3
to the environment	**S3 Total residuals & returns**	**676,3**	**46,9**	**1448,7**	**4,9**	**21,2**	**67,2**	**97,8**	**240,3**	**11,9**	**68,3**	**0,0**	**2683,5**
	Lost water from irrigation (infiltration)	621,0											621,0
	Treated waste water												0,0
	Untreated waster water	21,8	38,0	1448,2	4,9	20,3			240,3	2,6	68,3		1844,4
	Cooling water (energy)												0,0
	Water used for hydroelectricity												0,0
	Water lost in transport	33,5	8,9	0,5	0,0	0,9	67,2	**97,8**		9,3			218,1
	Other loss of water and adjustment										**0,0**		0,0
	S4 Consumption	**-0,1**	**0,0**	**33,7**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**33,6**
	Evaporation and Evapotranspiration	-0,1		33,7									33,6
	Direct discharge to the sea			0,0									0,0
Total supply, residuals & consumption		***679,2***	***46,9***	***1482,4***	***4,9***	***59,5***	***597,2***	***350,8***	***240,3***	***47,2***	***240,3***	***0,0***	***3748,7***

Table 8.3/8.5 Water Supply & Use Table, Moldova, 1998

Million cubic metres

		Agriculture	Fisheries	Energy	Mining	Manufacturing & Construction	Distribution/ irrigation water	Distribution/ municipal water	Sewerage	Government	Household	Rest of the World	Total
from the enironment	**U1 Total abstraction**	**69,1**	**36**	**724**	**5**	**30**	**70**	**288**	**0**	**19,8**	**25**	**0**	**1268,3**
	from surface water	43	36	722	0	15	70	186	0	0	0	0	1072,1
	of which reservoirs/dams												*0*
	of which lakes												*0*
	of which rivers												*0*
	of which springs												*0*
	from groundwater (wells, …)	26,5	0	2,1	5	15	0	102		20	25		196
	from other water (sea)												0
	for own use												
	for delivery												
within the economy	**U2 Total water received**	**51,4**	**0**	**17,2**	**0**	**10**	**0,1**	**7,3**	**213**	**7**	**199**	**0**	**505,7**
	Water received by users	51	0	17	0	10	0	7		7	199	0	293
	of which recycled water				*0*	*7*							7
	Waste water for sewerage								213				213
Total use		***120,5***	***36***	***741***	***5***	***41***	***70***	***296***	***213***	***27***	***225***	***0***	***1774***
within the economy	**S2 Total water supplied**	**0,2**	**0**	**8**	**0**	**28**	**51**	**226**	**0**	**33,3**	**159**	**0**	**505,7**
	Water supplied to users	0,2	0	8	0	7	51	226	0	1	0	0	293
	of which recycled water			*8*		*7*							
	Waste water supplied to sewerage					22			0	32	159		213
to the environment	**S3 Total residuals & returns**	**120**	**36**	**708,8**	**5**	**12**	**20**	**70**	**213**	**-5,9**	**65**	**0**	**1244,3**
	Lost water from irrigation (infiltration)	92											92
	Treated waste water												0
	Untreated waster water	11,8	28		5	12			213	2	65		338
	Cooling water (energy)			708,5									709
	Water used for hydroelectricity												0
	Water lost in transport	16,5	8	0,3	0		20	**70**					114
	Other loss of water and adjustment									-8	**0**		-8
	S4 Consumption	**0**	**0**	**25**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**24,7**
	Evaporation and Evapotranspiration	0		24,6	0								25
	Direct discharge to the sea			0									0
Total supply, residuals & consumption		***120,5***	***36***	***741***	***5***	***41***	***70***	***296***	***213***	***27***	***225***	***0***	***1774,7***

Table 8.3/8.5 Water Supply & Use Table, Moldova, 2002

Million cubic metres

		Agriculture	Fisheries	Energy	Mining	Manufacturing & Construction	Distribution/ irrigation water	Distribution/ municipal water	Sewerage	Government	Household	Rest of the World	**Total**
from the enironment	**U1 Total abstraction**	**17,8**	**4,0**	**555,8**	**5,5**	**15,8**	**58,7**	**181,2**	**0,0**	**0,4**	**20,0**	**0,0**	**859,3**
	from surface water	3,5	4,0	553,4	0,0	10,5	58,7	102,8	0,0	0,1	0,0	0,0	732,9
	of which reservoirs/dams												*0,0*
	of which lakes	*1,7*	*1,1*	*539,8*		*1,2*	*8,3*			*0,1*			*552,2*
	of which rivers	*1,8*	*2,9*	13,5	*0,0*	*9,3*	*50,4*	*102,8*					*180,8*
	of which springs												*0,0*
	from groundwater (wells, …)	14,3	0,0	2,5	5,5	5,3	0,0	78,4		0,3	20,0		126,3
	from other water (sea)												0,0
	for own use												
	for delivery												
within the economy	**U2 Total water received**	**41,7**	**0,0**	**7,7**	**0,0**	**23,2**	**0,1**	**2,7**	**108,4**	**19,1**	**98,4**	**0,0**	**301,2**
	Water received by users	38,6	0,0	7,7	0,0	21,9	0,1	2,7		19,0	98,4	0,0	188,5
	of which recycled water				*0,0*	*0,0*							0,0
	Waste water for sewerage	3,0		0,0		1,2			108,4	0,1			112,8
Total use		***59,5***	***4,0***	***563,5***	***5,5***	***39,0***	***58,8***	***183,8***	***108,4***	***19,5***	***118,4***	***0,0***	***1160,5***
within the economy	**S2 Total water supplied**	**12,2**	**0,0**	**0,8**	**0,0**	**10,0**	**38,0**	**135,3**	**1,3**	**14,3**	**89,4**	**0,0**	**301,2**
	Water supplied to users	12,1	0,0	0,1	0,0	3,0	38,0	135,3	1,3	0,1	3,0		192,8
	of which recycled water			*0,1*		*3,0*							
	Waste water supplied to sewerage	0,1		0,6		7,0			0,0	14,3	86,4		108,4
to the environment	**S3 Total residuals & returns**	**25,4**	**3,5**	**557,1**	**5,5**	**19,1**	**20,8**	**48,5**	**107,1**	**5,2**	**29,0**	**0,0**	**821,2**
	Lost water from irrigation (infiltration)	11,9											11,9
	Treated waste water	0,8		3,1		3,2			127,0	0,9	4,0		138,9
	Untreated waster water	0,0	3,5		5,4	2,3	17,6		0,8	0,2	25,0		54,7
	Cooling water (energy)			532,9									532,9
	Water used for hydroelectricity												0,0
	Water lost in transport			0,1			3,2	**55,3**					58,7
	Other loss of water and adjustment	12,7		21,0	0,1	**13,6**	0,0	-6,7	-20,7	4,1			24,1
	S4 Consumption	**21,9**	**0,6**	**5,6**	**0,0**	**10,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**38,1**
	Evaporation and Evapotranspiration	21,9	0,6	5,6	0,0	10,0	0,0						38,1
	Direct discharge to the sea			0,0									0,0
Total supply, residuals & consumption		***59,5***	***4,0***	***563,5***	***5,5***	***39,1***	***58,8***	***183,8***	***108,4***	***19,5***	***118,4***	***0,0***	***1160,5***

Table 8.4 Matrix of flows within the economy, Moldova, 2002

Million cubic metres

	Agriculture	Fisheries	Energy	Mining	Manufacturing & Construction	Distribution/ irrigation water	Distribution/ municipal water	Sewerage	Government	Household	Rest of the World	**S2 Total water supplied**
Agriculture					0,018		0,005	0,083	0,057	12		**12,2**
Fisheries												**0,0**
Energy					0,115	0,002		0,644	0,013			**0,8**
Mining								0				**0,0**
Manufacturing	0,059		0,253				2,656	7	0,021			**10,0**
Distribution/ irrigation water	37,874				0,054			0,001	0,027			**38,0**
Distribution/ municipal water	0,73		7,428	0	22	0,083			19	86		**135,3**
Sewerage	0,002		0,005		1,211				0,083			**1,3**
Government	0,002				0,027		0,032	14				**14,3**
Household	3							86				**89,4**
Rest of the World												**0,0**
U2 Total water received (use)	**41,7**	**0,0**	**7,7**	**0,0**	**23,2**	**0,1**	**2,7**	**108,4**	**19,1**	**98,4**	**0,0**	**301,2**

Table 8.7An asset account for water, Moldova, 1994

Million cubic metres

		EA.131.Surface water			EA.132	EA.12 & EA.2 (except 2.4)	Rest of the World and Sea	Total
		EA.1311 Reservoirs/ Dams	EA.1312 Lakes	EA.1313 Rivers	Groundwater	Land & soil		
Opening Stocks			**2743,5**	**500**	**150000**	**5000**		**158243,5**
Abstraction (-)	Total abstraction			2452,6	264,5			2717,1
	Sustainable use							*0*
	Depletion							*0*
duals & return	Lost water from irrigation				0,0	621,0		621,0
	Wastewater	0	0	315,3	81,1		0	396,4
	Treated waste water							*0,0*
	Untreated waster water							*0,0*
	Cooling water			1448,0				1448,0
	Water used for hydroelectricity							0,0
	Lost water in transport				218,0			218,0
Precipitation (+)			**210,2**	168,2		**13635,5**		14013,9
Inflows (+)				**9000,0**	1100,0			**10100,0**
Net natural transfers (+,-)		**0**	**0,0**	**1853,0**	**264,5**	**-2117,5**		**0,0**
Spontaneous Real Evapo-Transpiration (-)			415,9	332,8		**12723,3**		13472,0
Outflows (-)	To other country/basin							
	To the sea			10000,0	1379,1			**11379,1**
								0,0
Other volume	Due to natural disaster							0,0
	Discovery (+)							0,0
	Others							0,0
Net accumulation		***0***	***-205,7***	***-0,9***	***20,0***	***-584,3***	***0,0***	-770,9
Closing Stocks		**0**	**2537,8**	**499,1**	**150020,0**	**4415,7**		**157472,6**

Table 8.7 An asset account for water, Moldova, 1998

Million cubic metres

		EA.131.Surface water			EA.132	EA.12 & EA.2 (except 2.4)	Rest of the World and Sea	Total
		EA.1311 Reservoirs/ Dams	EA.1312 Lakes	EA.1313 Rivers	Groundwater	Land & soil		
Opening Stocks			**2744**	**500**	**150000**	**5000**		**158244**
Abstraction (-)	Total abstraction			1072	196			1268
	Sustainable use							*0*
	Depletion							*0*
Residuals & returns (+)	Lost water from irrigation				0	92		92
	Wastewater	0	0	264	74		0	338
	Treated waste water							*0*
	Untreated waster water							*0*
	Cooling water			709				709
	Water used for hydroelectricity							0
	Lost water in transport				114			114
Precipitation (+)			**363**	290		**23516**		24169
Inflows (+)				**17750**	1100			**18850**
Net natural transfers (+,-)		**0**	**0**	**1813**	**96**	**-1909**		**0**
Spontaneous Real Evapo-Transpiration (-)			416	333		**21778**		22527
Outflows (-)	To other country/basin			19420	1267			**20687**
	To the sea							**0**
Other volume changes	Due to natural disaster							0
	Discovery (+)							0
	Others							0
Net accumulation		***0***	***-54***	***0***	***-80***	***-79***	***0***	-212
Closing Stocks		**0**	**2690**	**500**	**149920**	**4921**		**158032**